Key comparison CCEM-K2 **MEASURAND : Resistance** **NOMINAL VALUE : 10 MΩ**

x_i: result of measurement carried out by laboratory i, expressed as the relative deviation from the nominal value R_0 = 10 MΩ, namely $R_i = R_0(1 + x_i)$ where R_i is the resistance measured by laboratory i; the x_i's are corrected to a nominal temperature of 23 °C

U_i: expanded uncertainty (k = 2) of x_i

S/N serial number of the travelling standard

$D_{i\,COMB}$ combined mean of the three travelling standards relative differences from a least-squares linear regression of the NIST values for each travelling standard

$U_{i\,COMB}$ expanded uncertainty (k = 2) of $D_{i\,COMB}$

(the calculation of the $D_{i\,COMB}$'s and $U_{i\,COMB}$'s is described in detail in the report)

Lab i ⇩	S/N			U_i	Mean date of measurement	$D_{i\,COMB}$	$U_{i\,COMB}$
	HR7550	HR7551	HR7552				
	x_i	x_i	x_i				
	/ 10^{-6}	/ 10^{-6}	/ 10^{-6}	/ 10^{-6}		/ 10^{-6}	/ 10^{-6}
NIST	28.2	4.6	18.6	3.0	1996-08-24	-1.6	3.0
NRC*	31	5	20	6.0	1996-10-20	-0.8	5.8
NIST	30.8	6.7	20.2	3.0	1996-12-08	0.1	3.0
LNE	31.49	6.97	23.04	1.4	1997-03-04	0.3	2.3
NPL	30.8	7.1	23.8	1.7	1997-05-06	0.1	2.5
PTB	31.6	7.5	24.8	5.0	1997-07-01	0.4	5.0
NIST	32.7	8.1	28.4	3.0	1997-08-13	1.1	3.0
NMIA	32.3	7.3	27.0	5.0	1997-10-25	0.1	5.5
MSL	32.5	7.3	28.6	1.2	1998-01-11	-0.1	2.3
NMISA*	50	-20	30	104	1998-02-18	-15.4	79
NIST	36.3	8.9	34.5	3.0	1998-04-30	1.9	3.0
SP	34.3	8.7	32.8	3.6	1998-06-27	0.9	4.1
METAS*	34.7	8.9	33.2	1.4	1998-08-14	1.0	2.3
INRIM*	35.0	9.4	33.7	5.4	1998-09-28	1.3	5.5
VSL	35.4	9.1	35.0	6.0	1998-12-25	0.9	6.5
NIST	34.9	7.8	31.7	3.0	1999-02-22	-0.6	3.0
KRISS	32.7	7.1	30.8	6.0	1999-05-23	-2.0	6.3
NIST	35.5	8.5	33.3	3.0	1999-08-07	-0.5	3.0
NIM**	36.9	10.2	38.1	2.0	1999-11-14	0.9	2.7
VNIIM***	36	10	37	1.7	2000-01-10	0.3	3.0
NIST	34.7	10.0	35.5	3.0	2000-03-12	-0.4	3.0
NIST(Mean)					1998-05-07	0.0	3.0

*** Measurements at 10 V**
**** Measurements at 91 V**
***** Measurements at 50 V**
All other measurements at 100 V

Key comparison EUROMET.EM-K2

MEASURAND : **Resistance**
NOMINAL VALUE : **10 MΩ**

Individual measurements and uncertainties reported by laboratories participant in EUROMET.EM-K2 are given in the annexes of the EUROMET.EM-K2 Final Report.
LNE (France) did not measure at nominal value 10 MΩ.

Measurements were carried out between August 2005 and April 2007.

Key comparison EURAMET.EM-K2.1

MEASURAND : **Resistance**
NOMINAL VALUE : **10 MΩ**

Individual measurements and uncertainties reported by laboratories participant in EURAMET.EM-K2.1 are given in the annexes of the EURAMET.EM-K2.1 Final Report.

Measurements were carried out between March 2010 and February 2011.

Key comparisons CCEM-K2, EUROMET.EM-K2 and EURAMET.EM-K2.1

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ**

Key comparison CCEM-K2

The key comparison reference value is obtained from the weighted average of the $D_{i\,COMB}$'s, and is $x_R = 0.346 \times 10^{-6}$.
The expanded uncertainty ($k = 2$) of x_R is: $U_R = 0.859 \times 10^{-6}$.

The degree of equivalence of each laboratory with respect to the key comparison reference value is given by a pair of terms: $D_i = D_{i\,COMB} - x_R$ and its expanded uncertainty ($k = 2$), $U_i = (U_{i\,COMB}^2 - U_R^2)^{1/2}$.

The degree of equivalence between two laboratories is given by a pair of terms: $D_{ij} = D_i - D_j$ and its expanded uncertainty ($k = 2$), U_{ij} which calculation is described in detail in the CCEM-K2 Final Report.

Key comparison EUROMET.EM-K2

The procedure for analysing the results of EUROMET.EM-K2 is explained in Section 6.4 on page 17 of the EUROMET.EM-K2 Final Report. A EUROMET.EM-K2 reference value and its uncertainty are first computed using results obtained in this key comparison. Degrees of equivalence of each participating laboratory with respect to the EUROMET.EM-K2 reference value, as well as pair-wise degrees of equivalence, are then computed.

Linking EUROMET.EM-K2 to CCEM-K2

The linkage of EUROMET.EM-K2 results to those of CCEM-K2 is ensured by the common participation of METAS, PTB, VSL, NPL and VNIIM in both comparisons. The detailed calculation of the linkage is explained in Section 6.6 on page 31 of the Final Report.

Linking EURAMET.EM-K2.1 to CCEM-K2

The results of EURAMET.EM-K2.1 are first linked to the EUROMET.EM-K2 reference value through the results of METAS, and then linked to the CCEM-K2 key comparison reference value as done for the EUROMET.EM-K2 results (see Sections 6.3 and 6.4 of the EURAMET.EM-K2.1 Final Report).

This makes it possible to extend the CCEM-K2 degrees of equivalence to those laboratories which participated in key comparisons EUROMET.EM-K2 and EURAMET.EM-K2.1 only. No pair-wise degrees of equivalence involving EURAMET.EM-K2.1 have been computed.

Key comparisons CCEM-K2, EUROMET.EM-K2 and EURAMET.EM-K2.1

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ**

Degrees of equivalence relative to the CCEM key comparison reference value

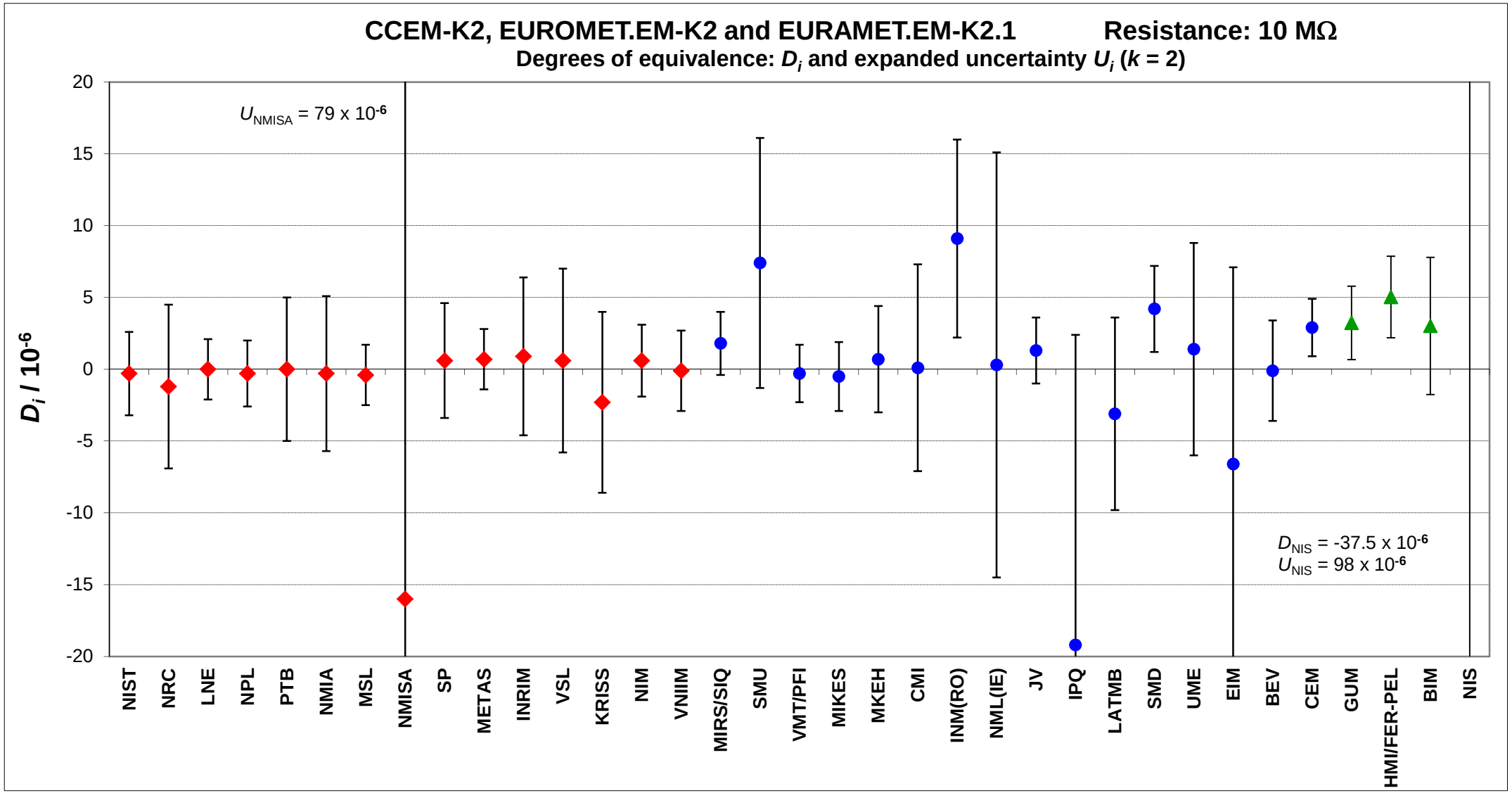
Lab *i* ⇩

	D_i / 10^{-6}	U_i / 10^{-6}
NIST	-0.3	2.9
NRC	-1.2	5.7
LNE	0.0	2.1
NPL	-0.3	2.3
PTB	0.0	5.0
NMIA	-0.3	5.4
MSL	-0.4	2.1
NMISA	-16	79
SP	0.6	4.0
METAS	0.7	2.1
INRIM	0.9	5.5
VSL	0.6	6.4
KRISS	-2.3	6.3
NIM	0.6	2.5
VNIIM	-0.1	2.8

MIRS/SIQ	1.8	2.2
SMU	7.4	8.7
VMT/PFI	-0.3	2.0
MIKES	-0.5	2.4
MKEH	0.7	3.7
CMI	0.1	7.2
INM(RO)	9.1	6.9
NML(IE)	0.3	14.8
JV	1.3	2.3
IPQ	-19.2	21.6
LATMB	-3.1	6.7
SMD	4.2	3.0
UME	1.4	7.4
EIM	-6.6	13.7
BEV	-0.1	3.5
CEM	2.9	2.0

GUM	3.2	2.6
HMI/FER-PEL	5.0	2.8
BIM	3.0	4.8
NIS	-37.5	98.4

In black: participants in CCEM-K2
In blue: participants in EUROMET.EM-K2 only
In green: participants in EURAMET.EM-K2.1 only



Red diamonds: participants in CCEM-K2
Blue circles: participants in EUROMET.EM-K2
Green triangles: participants in EURAMET.EM-K2.1 only

Key comparisons CCEM-K2 and EUROMET.EM-K2

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ** **Matrix of equivalence**

Lab *j* ⇒ (columns); Lab *i* ⇓ (rows)

Lab *i*	D_i / 10^{-6}	U_i / 10^{-6}	NIST D_{ij} / 10^{-6}	NIST U_{ij} / 10^{-6}	NRC D_{ij} / 10^{-6}	NRC U_{ij} / 10^{-6}	LNE D_{ij} / 10^{-6}	LNE U_{ij} / 10^{-6}	NPL D_{ij} / 10^{-6}	NPL U_{ij} / 10^{-6}	PTB D_{ij} / 10^{-6}	PTB U_{ij} / 10^{-6}	NMIA D_{ij} / 10^{-6}	NMIA U_{ij} / 10^{-6}	MSL D_{ij} / 10^{-6}	MSL U_{ij} / 10^{-6}	NMISA D_{ij} / 10^{-6}	NMISA U_{ij} / 10^{-6}	SP D_{ij} / 10^{-6}	SP U_{ij} / 10^{-6}
NIST	-0.3	2.9			0.8	6.5	-0.3	3.8	-0.1	3.9	-0.4	5.9	-0.1	6.3	0.1	3.8	15	79	-0.9	5.1
NRC	-1.2	5.7	-0.8	6.5			-1.2	6.0	-0.9	6.1	-1.2	7.5	-0.9	7.8	-0.8	6.0	15	79	-1.8	6.9
LNE	0.0	2.1	0.3	3.8	1.2	6.0			0.3	3.1	0.0	5.4	0.3	5.8	0.4	2.9	16	79	-0.6	4.5
NPL	-0.3	2.3	0.1	3.9	0.9	6.1	-0.3	3.1			-0.3	5.5	0.0	5.9	0.1	3.1	15	79	-0.9	4.6
PTB	0.0	5.0	0.4	5.9	1.2	7.5	0.0	5.4	0.3	5.5			0.3	7.3	0.4	5.4	16	79	-0.6	6.4
NMIA	-0.3	5.4	0.1	6.3	0.9	7.8	-0.3	5.8	0.0	5.9	-0.3	7.3			0.1	5.8	15	79	-0.9	6.7
MSL	-0.4	2.1	-0.1	3.8	0.8	6.0	-0.4	2.9	-0.1	3.1	-0.4	5.4	-0.1	5.8			15	79	-1.0	4.5
NMISA	-16	79	-15	79	-15	79	-16	79	-15	79	-16	79	-15	79	-15	79			-16	79
SP	0.6	4.0	0.9	5.1	1.8	6.9	0.6	4.5	0.9	4.6	0.6	6.4	0.9	6.7	1.0	4.5	16	79		
METAS	0.7	2.1	1.0	3.8	1.9	6.0	0.7	2.9	1.0	3.1	0.6	5.4	0.9	5.8	1.1	3.1	16	79	0.1	4.6
INRIM	0.9	5.5	1.3	6.3	2.1	7.8	1.0	5.8	1.2	5.9	0.9	7.4	1.2	7.7	1.4	5.9	17	79	0.4	6.8
VSL	0.6	6.4	0.9	7.2	1.8	8.5	0.6	6.7	0.9	6.8	0.5	8.1	0.8	8.4	1.0	6.8	16	79	0.0	7.6
KRISS	-2.3	6.3	-2.0	7.0	-1.2	8.3	-2.3	6.5	-2.1	6.6	-2.4	7.9	-2.1	8.3	-1.9	6.6	13	79	-2.9	7.4
NIM	0.6	2.5	0.9	4.0	1.8	5.9	0.6	2.8	0.9	3.1	0.6	5.4	0.9	5.8	1.0	3.1	16	79	0.0	4.6
VNIIM	-0.1	2.8	0.3	4.2	1.1	6.0	0.0	3.1	0.2	3.3	-0.1	5.5	0.2	6.0	0.4	3.3	16	79	-0.6	4.8
MIRS/SIQ	1.8	2.2	2.1	3.6	3.0	6.1	1.8	3.0	2.1	2.9	1.8	5.0	2.1	5.8	2.2	3.0	18	79	1.2	4.5
SMU	7.4	8.7	7.7	9.2	8.6	10.4	7.4	9.0	7.7	8.9	7.4	9.8	7.7	10.3	7.8	9.0	23	80	6.8	9.6
VMT/PFI	-0.3	2.0	0.0	3.5	0.9	6.0	-0.3	2.9	0.0	2.8	-0.3	4.9	0.0	5.7	0.1	2.9	16	79	-0.9	4.5
MIKES	-0.5	2.4	-0.2	3.8	0.7	6.2	-0.5	3.2	-0.2	3.1	-0.5	5.1	-0.2	5.9	-0.1	3.2	16	79	-1.1	4.7
MKEH	0.7	3.7	1.0	4.7	1.9	6.8	0.7	4.2	1.0	4.1	0.7	5.8	1.0	6.5	1.1	4.2	17	79	0.1	5.4
CMI	0.1	7.2	0.4	7.8	1.3	9.2	0.1	7.5	0.4	7.5	0.1	8.5	0.4	9.0	0.5	7.5	16	79	-0.5	8.2
INM(RO)	9.1	6.9	9.4	7.5	10.3	9.0	9.1	7.2	9.4	7.2	9.1	8.2	9.4	8.8	9.5	7.2	25	79	8.5	8.0
NML(IE)	0.3	14.8	0.6	15.1	1.5	15.9	0.3	15.0	0.6	15.0	0.3	15.5	0.6	15.8	0.7	15.0	16	80	-0.3	15.4
JV	1.3	2.3	1.6	3.7	2.5	6.2	1.3	3.1	1.6	3.0	1.3	5.0	1.6	5.9	1.7	3.1	17	79	0.7	4.6
IPQ	-19.2	21.6	-18.9	21.8	-18.0	22.4	-19.2	21.7	-18.9	21.7	-19.2	22.1	-18.9	22.3	-18.8	21.7	-3	82	-19.8	22.0
LATMB	-3.1	6.7	-2.8	7.3	-1.9	8.8	-3.1	7.0	-2.8	6.9	-3.1	8.0	-2.8	8.6	-2.7	7.0	13	79	-3.7	7.8
SMD	4.2	3.0	4.5	4.2	5.4	6.4	4.2	3.6	4.5	3.5	4.2	5.4	4.5	6.2	4.6	3.6	20	79	3.6	5.0
UME	1.4	7.4	1.7	7.9	2.6	9.3	1.4	7.7	1.7	7.6	1.4	8.6	1.7	9.1	1.8	7.7	17	79	0.8	8.4
EIM	-6.6	13.7	-6.3	14.0	-5.4	14.8	-6.6	13.8	-6.3	13.8	-6.6	14.4	-6.3	14.7	-6.2	13.8	9	80	-7.2	14.2
BEV	-0.1	3.5	0.2	4.5	1.1	6.7	-0.1	4.1	0.2	4.0	-0.1	5.7	0.2	6.4	0.3	4.1	16	79	-0.7	5.3
CEM	2.9	2.0	3.2	3.5	4.1	6.0	2.9	2.9	3.2	2.8	2.9	4.9	3.2	5.7	3.3	2.9	19	79	2.3	4.5

Key comparisons CCEM-K2 and EUROMET.EM-K2

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ** **Matrix of equivalence (Continued)**

Lab *j* ⇒

Lab *i* ⇓			METAS		INRIM		VSL		KRISS		NIM		VNIIM		MIRS/SIQ		SMU		VMT/PFI	
	D_i / 10^{-6}	U_i / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}	D_{ij} / 10^{-6}	U_{ij} / 10^{-6}
NIST	-0.3	2.9	-1.0	3.8	-1.3	6.3	-0.9	7.2	2.0	7.0	-0.9	4.0	-0.3	4.2	-2.1	3.6	-7.7	9.2	0.0	3.5
NRC	-1.2	5.7	-1.9	6.0	-2.1	7.8	-1.8	8.5	1.2	8.3	-1.8	5.9	-1.1	6.0	-3.0	6.1	-8.6	10.4	-0.9	6.0
LNE	0.0	2.1	-0.7	2.9	-1.0	5.8	-0.6	6.7	2.3	6.5	-0.6	2.8	0.0	3.1	-1.8	3.0	-7.4	9.0	0.3	2.9
NPL	-0.3	2.3	-1.0	3.1	-1.2	5.9	-0.9	6.8	2.1	6.6	-0.9	3.1	-0.2	3.3	-2.1	2.9	-7.7	8.9	0.0	2.8
PTB	0.0	5.0	-0.6	5.4	-0.9	7.4	-0.5	8.1	2.4	7.9	-0.6	5.4	0.1	5.5	-1.8	5.0	-7.4	9.8	0.3	4.9
NMIA	-0.3	5.4	-0.9	5.8	-1.2	7.7	-0.8	8.4	2.1	8.3	-0.9	5.8	-0.2	6.0	-2.1	5.8	-7.7	10.3	0.0	5.7
MSL	-0.4	2.1	-1.1	3.1	-1.4	5.9	-1.0	6.8	1.9	6.6	-1.0	3.1	-0.4	3.3	-2.2	3.0	-7.8	9.0	-0.1	2.9
NMISA	-16	79	-16	79	-17	79	-16	79	-13	79	-16	79	-16	79	-18	79	-23	80	-16	79
SP	0.6	4.0	-0.1	4.6	-0.4	6.8	0.0	7.6	2.9	7.4	0.0	4.6	0.6	4.8	-1.2	4.5	-6.8	9.6	0.9	4.5
METAS	0.7	2.1			-0.3	5.9	0.1	6.8	3.0	6.6	0.1	3.2	0.7	3.4	-1.1	2.1	-6.7	8.7	1.0	1.9
INRIM	0.9	5.5	0.3	5.9			0.4	8.5	3.3	8.3	0.3	6.0	1.0	6.1	-0.9	5.9	-6.5	10.3	1.2	5.8
VSL	0.6	6.4	-0.1	6.8	-0.4	8.5			2.9	9.0	0.0	6.9	0.6	7.0	-1.2	6.4	-6.8	10.6	0.9	6.3
KRISS	-2.3	6.3	-3.0	6.6	-3.3	8.3	-2.9	9.0			-2.9	6.7	-2.3	6.8	-4.1	6.7	-9.7	10.8	-2.0	6.6
NIM	0.6	2.5	-0.1	3.2	-0.3	6.0	0.0	6.9	2.9	6.7			0.7	3.7	-1.2	3.3	-6.8	9.1	0.9	3.2
VNIIM	-0.1	2.8	-0.7	3.4	-1.0	6.1	-0.6	7.0	2.3	6.8	-0.7	3.7			-1.9	3.2	-7.5	9.0	0.2	3.1
MIRS/SIQ	1.8	2.2	1.1	2.1	0.9	5.9	1.2	6.4	4.1	6.7	1.2	3.3	1.9	3.2			-5.6	8.7	2.1	1.9
SMU	7.4	8.7	6.7	8.7	6.5	10.3	6.8	10.6	9.7	10.8	6.8	9.1	7.5	9.0	5.6	8.7			7.7	8.7
VMT/PFI	-0.3	2.0	-1.0	1.9	-1.2	5.8	-0.9	6.3	2.0	6.6	-0.9	3.2	-0.2	3.1	-2.1	1.9	-7.7	8.7		
MIKES	-0.5	2.4	-1.2	2.3	-1.4	6.0	-1.1	6.5	1.8	6.7	-1.1	3.5	-0.4	3.4	-2.4	2.4	-7.9	8.8	-0.2	2.2
MKEH	0.7	3.7	0.0	3.6	-0.2	6.6	0.1	7.0	3.0	7.3	0.1	4.4	0.8	4.4	-1.2	3.7	-6.8	9.2	0.9	3.5
CMI	0.1	7.2	-0.6	7.2	-0.8	9.1	-0.5	9.4	2.4	9.6	-0.5	7.6	0.2	7.6	-1.8	7.2	-7.3	11.1	0.4	7.1
INM(RO)	9.1	6.9	8.4	6.9	8.2	8.8	8.5	9.2	11.4	9.4	8.5	7.3	9.2	7.3	7.3	6.9	1.7	10.9	9.4	6.8
NML(IE)	0.3	14.8	-0.4	14.8	-0.6	15.8	-0.3	16.0	2.6	16.1	-0.3	15.0	0.4	15.0	-1.6	14.8	-7.2	17.1	0.5	14.8
JV	1.3	2.3	0.6	2.2	0.4	6.0	0.7	6.5	3.6	6.7	0.7	3.4	1.4	3.3	-0.5	2.3	-6.1	8.8	1.6	2.1
IPQ	-19.2	21.6	-19.9	21.6	-20.1	22.3	-19.8	22.5	-16.9	22.5	-19.8	21.8	-19.1	21.8	-21.0	21.6	-26.6	23.2	-18.9	21.6
LATMB	-3.1	6.7	-3.8	6.6	-4.0	8.7	-3.7	9.0	-0.8	9.2	-3.7	7.1	-3.0	7.1	-5.0	6.6	-10.6	10.8	-2.9	6.6
SMD	4.2	3.0	3.5	2.9	3.3	6.3	3.6	6.7	6.5	7.0	3.6	3.9	4.3	3.8	2.3	2.9	-3.2	8.9	4.5	2.8
UME	1.4	7.4	0.7	7.3	0.5	9.2	0.8	9.5	3.7	9.7	0.8	7.8	1.5	7.7	-0.4	7.4	-6.0	11.2	1.7	7.3
EIM	-6.6	13.7	-7.3	13.7	-7.5	14.7	-7.2	14.9	-4.3	15.1	-7.2	13.9	-6.5	13.9	-8.5	13.7	-14.1	16.1	-6.4	13.6
BEV	-0.1	3.5	-0.8	3.4	-1.0	6.5	-0.7	7.0	2.2	7.2	-0.7	4.3	0.0	4.2	-1.9	3.5	-7.5	9.1	0.2	3.3
CEM	2.9	2.0	2.2	1.9	2.0	5.8	2.3	6.3	5.2	6.6	2.3	3.2	3.0	3.1	1.0	1.9	-4.6	8.7	3.1	1.6

Key comparisons CCEM-K2 and EUROMET.EM-K2

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ** **Matrix of equivalence (Continued)**

Lab *i* ⇩	D_i / 10^{-6}	U_i / 10^{-6}	MIKES D_{ij} / 10^{-6}	MIKES U_{ij} / 10^{-6}	MKEH D_{ij} / 10^{-6}	MKEH U_{ij} / 10^{-6}	CMI D_{ij} / 10^{-6}	CMI U_{ij} / 10^{-6}	INM(RO) D_{ij} / 10^{-6}	INM(RO) U_{ij} / 10^{-6}	NML(IE) D_{ij} / 10^{-6}	NML(IE) U_{ij} / 10^{-6}	JV D_{ij} / 10^{-6}	JV U_{ij} / 10^{-6}	IPQ D_{ij} / 10^{-6}	IPQ U_{ij} / 10^{-6}	LATMB D_{ij} / 10^{-6}	LATMB U_{ij} / 10^{-6}	SMD D_{ij} / 10^{-6}	SMD U_{ij} / 10^{-6}
NIST	**-0.3**	2.9	**0.2**	3.8	**-1.0**	4.7	**-0.4**	7.8	**-9.4**	7.5	**-0.6**	15.1	**-1.6**	3.7	**18.9**	21.8	**2.8**	7.3	**-4.5**	4.2
NRC	**-1.2**	5.7	**-0.7**	6.2	**-1.9**	6.8	**-1.3**	9.2	**-10.3**	9.0	**-1.5**	15.9	**-2.5**	6.2	**18.0**	22.4	**1.9**	8.8	**-5.4**	6.4
LNE	**0.0**	2.1	**0.5**	3.2	**-0.7**	4.2	**-0.1**	7.5	**-9.1**	7.2	**-0.3**	15.0	**-1.3**	3.1	**19.2**	21.7	**3.1**	7.0	**-4.2**	3.6
NPL	**-0.3**	2.3	**0.2**	3.1	**-1.0**	4.1	**-0.4**	7.5	**-9.4**	7.2	**-0.6**	15.0	**-1.6**	3.0	**18.9**	21.7	**2.8**	6.9	**-4.5**	3.5
PTB	**0.0**	5.0	**0.5**	5.1	**-0.7**	5.8	**-0.1**	8.5	**-9.1**	8.2	**-0.3**	15.5	**-1.3**	5.0	**19.2**	22.1	**3.1**	8.0	**-4.2**	5.4
NMIA	**-0.3**	5.4	**0.2**	5.9	**-1.0**	6.5	**-0.4**	9.0	**-9.4**	8.8	**-0.6**	15.8	**-1.6**	5.9	**18.9**	22.3	**2.8**	8.6	**-4.5**	6.2
MSL	**-0.4**	2.1	**0.1**	3.2	**-1.1**	4.2	**-0.5**	7.5	**-9.5**	7.2	**-0.7**	15.0	**-1.7**	3.1	**18.8**	21.7	**2.7**	7.0	**-4.6**	3.6
NMISA	**-16**	79	**-16**	79	**-17**	79	**-16**	79	**-25**	79	**-16**	80	**-17**	79	**3**	82	**-13**	79	**-20**	79
SP	**0.6**	4.0	**1.1**	4.7	**-0.1**	5.4	**0.5**	8.2	**-8.5**	8.0	**0.3**	15.4	**-0.7**	4.6	**19.8**	22.0	**3.7**	7.8	**-3.6**	5.0
METAS	**0.7**	2.1	**1.2**	2.3	**0.0**	3.6	**0.6**	7.2	**-8.4**	6.9	**0.4**	14.8	**-0.6**	2.2	**19.9**	21.6	**3.8**	6.6	**-3.5**	2.9
INRIM	**0.9**	5.5	**1.4**	6.0	**0.2**	6.6	**0.8**	9.1	**-8.2**	8.8	**0.6**	15.8	**-0.4**	6.0	**20.1**	22.3	**4.0**	8.7	**-3.3**	6.3
VSL	**0.6**	6.4	**1.1**	6.5	**-0.1**	7.0	**0.5**	9.4	**-8.5**	9.2	**0.3**	16.0	**-0.7**	6.5	**19.8**	22.5	**3.7**	9.0	**-3.6**	6.7
KRISS	**-2.3**	6.3	**-1.8**	6.7	**-3.0**	7.3	**-2.4**	9.6	**-11.4**	9.4	**-2.6**	16.1	**-3.6**	6.7	**16.9**	22.5	**0.8**	9.2	**-6.5**	7.0
NIM	**0.6**	2.5	**1.1**	3.5	**-0.1**	4.4	**0.5**	7.6	**-8.5**	7.3	**0.3**	15.0	**-0.7**	3.4	**19.8**	21.8	**3.7**	7.1	**-3.6**	3.9
VNIIM	**-0.1**	2.8	**0.4**	3.4	**-0.8**	4.4	**-0.2**	7.6	**-9.2**	7.3	**-0.4**	15.0	**-1.4**	3.3	**19.1**	21.8	**3.0**	7.1	**-4.3**	3.8
MIRS/SIQ	**1.8**	2.2	**2.4**	2.4	**1.2**	3.7	**1.8**	7.2	**-7.3**	6.9	**1.6**	14.8	**0.5**	2.3	**21.0**	21.6	**5.0**	6.6	**-2.3**	2.9
SMU	**7.4**	8.7	**7.9**	8.8	**6.8**	9.2	**7.3**	11.1	**-1.7**	10.9	**7.2**	17.1	**6.1**	8.8	**26.6**	23.2	**10.6**	10.8	**3.2**	8.9
VMT/PFI	**-0.3**	2.0	**0.2**	2.2	**-0.9**	3.5	**-0.4**	7.1	**-9.4**	6.8	**-0.5**	14.8	**-1.6**	2.1	**18.9**	21.6	**2.9**	6.6	**-4.5**	2.8
MIKES	**-0.5**	2.4			**-1.2**	3.8	**-0.6**	7.2	**-9.6**	6.9	**-0.8**	14.9	**-1.8**	2.5	**18.7**	21.7	**2.6**	6.7	**-4.7**	3.1
MKEH	**0.7**	3.7	**1.2**	3.8			**0.6**	7.8	**-8.4**	7.5	**0.4**	15.1	**-0.6**	3.8	**19.9**	21.9	**3.8**	7.3	**-3.5**	4.1
CMI	**0.1**	7.2	**0.6**	7.2	**-0.6**	7.8			**-9.0**	9.7	**-0.2**	16.3	**-1.2**	7.2	**19.3**	22.7	**3.2**	9.5	**-4.1**	7.4
INM(RO)	**9.1**	6.9	**9.6**	6.9	**8.4**	7.5	**9.0**	9.7			**8.8**	16.2	**7.8**	6.9	**28.3**	22.6	**12.3**	9.3	**4.9**	7.1
NML(IE)	**0.3**	14.8	**0.8**	14.9	**-0.4**	15.1	**0.2**	16.3	**-8.8**	16.2			**-1.0**	14.8	**19.5**	26.1	**3.4**	16.1	**-3.9**	14.9
JV	**1.3**	2.3	**1.8**	2.5	**0.6**	3.8	**1.2**	7.2	**-7.8**	6.9	**1.0**	14.8			**20.5**	21.7	**4.5**	6.7	**-2.9**	3.0
IPQ	**-19.2**	21.6	**-18.7**	21.7	**-19.9**	21.9	**-19.3**	22.7	**-28.3**	22.6	**-19.5**	26.1	**-20.5**	21.7			**-16.0**	22.5	**-23.4**	21.7
LATMB	**-3.1**	6.7	**-2.6**	6.7	**-3.8**	7.3	**-3.2**	9.5	**-12.3**	9.3	**-3.4**	16.1	**-4.5**	6.7	**16.0**	22.5			**-7.3**	6.9
SMD	**4.2**	3.0	**4.7**	3.1	**3.5**	4.1	**4.1**	7.4	**-4.9**	7.1	**3.9**	14.9	**2.9**	3.0	**23.4**	21.7	**7.3**	6.9		
UME	**1.4**	7.4	**1.9**	7.5	**0.8**	8.0	**1.3**	10.1	**-7.7**	9.9	**1.2**	16.4	**0.1**	7.4	**20.6**	22.8	**4.6**	9.7	**-2.7**	7.6
EIM	**-6.6**	13.7	**-6.1**	13.7	**-7.3**	14.0	**-6.7**	15.3	**-15.7**	15.2	**-6.9**	20.0	**-8.0**	13.7	**12.5**	25.5	**-3.5**	15.0	**-10.8**	13.8
BEV	**-0.1**	3.5	**0.4**	3.6	**-0.8**	4.6	**-0.2**	7.7	**-9.2**	7.4	**-0.4**	15.1	**-1.4**	3.5	**19.1**	21.8	**3.1**	7.2	**-4.3**	3.9
CEM	**2.9**	2.0	**3.4**	2.1	**2.2**	3.5	**2.8**	7.1	**-6.2**	6.8	**2.6**	14.8	**1.5**	2.0	**22.0**	21.6	**6.0**	6.5	**-1.3**	2.6

Key comparisons CCEM-K2 and EUROMET.EM-K2

MEASURAND : Resistance **NOMINAL VALUE : 10 MΩ** **Matrix of equivalence (Continued)**

Lab *j* ⇨

Lab *i* ⇩	D_i / 10^{-6}	U_i / 10^{-6}	UME D_{ij} / 10^{-6}	UME U_{ij} / 10^{-6}	EIM D_{ij} / 10^{-6}	EIM U_{ij} / 10^{-6}	BEV D_{ij} / 10^{-6}	BEV U_{ij} / 10^{-6}	CEM D_{ij} / 10^{-6}	CEM U_{ij} / 10^{-6}
NIST	-0.3	2.9	-1.7	7.9	6.3	14.0	-0.2	4.5	-3.2	3.5
NRC	-1.2	5.7	-2.6	9.3	5.4	14.8	-1.1	6.7	-4.1	6.0
LNE	0.0	2.1	-1.4	7.7	6.6	13.8	0.1	4.1	-2.9	2.9
NPL	-0.3	2.3	-1.7	7.6	6.3	13.8	-0.2	4.0	-3.2	2.8
PTB	0.0	5.0	-1.4	8.6	6.6	14.4	0.1	5.7	-2.9	4.9
NMIA	-0.3	5.4	-1.7	9.1	6.3	14.7	-0.2	6.4	-3.2	5.7
MSL	-0.4	2.1	-1.8	7.7	6.2	13.8	-0.3	4.1	-3.3	2.9
NMISA	-16	79	-17	79	-9	80	-16	79	-19	79
SP	0.6	4.0	-0.8	8.4	7.2	14.2	0.7	5.3	-2.3	4.5
METAS	0.7	2.1	-0.7	7.3	7.3	13.7	0.8	3.4	-2.2	1.9
INRIM	0.9	5.5	-0.5	9.2	7.5	14.7	1.0	6.5	-2.0	5.8
VSL	0.6	6.4	-0.8	9.5	7.2	14.9	0.7	7.0	-2.3	6.3
KRISS	-2.3	6.3	-3.7	9.7	4.3	15.1	-2.2	7.2	-5.2	6.6
NIM	0.6	2.5	-0.8	7.8	7.2	13.9	0.7	4.3	-2.3	3.2
VNIIM	-0.1	2.8	-1.5	7.7	6.5	13.9	0.0	4.2	-3.0	3.1
MIRS/SIQ	1.8	2.2	0.4	7.4	8.5	13.7	1.9	3.5	-1.0	1.9
SMU	7.4	8.7	6.0	11.2	14.1	16.1	7.5	9.1	4.6	8.7
VMT/PFI	-0.3	2.0	-1.7	7.3	6.4	13.6	-0.2	3.3	-3.1	1.6
MIKES	-0.5	2.4	-1.9	7.5	6.1	13.7	-0.4	3.6	-3.4	2.1
MKEH	0.7	3.7	-0.8	8.0	7.3	14.0	0.8	4.6	-2.2	3.5
CMI	0.1	7.2	-1.3	10.1	6.7	15.3	0.2	7.7	-2.8	7.1
INM(RO)	9.1	6.9	7.7	9.9	15.7	15.2	9.2	7.4	6.2	6.8
NML(IE)	0.3	14.8	-1.2	16.4	6.9	20.0	0.4	15.1	-2.6	14.8
JV	1.3	2.3	-0.1	7.4	8.0	13.7	1.4	3.5	-1.5	2.0
IPQ	-19.2	21.6	-20.6	22.8	-12.5	25.5	-19.1	21.8	-22.0	21.6
LATMB	-3.1	6.7	-4.6	9.7	3.5	15.0	-3.1	7.2	-6.0	6.5
SMD	4.2	3.0	2.7	7.6	10.8	13.8	4.3	3.9	1.3	2.6
UME	1.4	7.4			8.1	15.4	1.5	7.8	-1.4	7.3
EIM	-6.6	13.7	-8.1	15.4			-6.6	13.9	-9.5	13.6
BEV	-0.1	3.5	-1.5	7.8	6.6	13.9			-3.0	3.2
CEM	2.9	2.0	1.4	7.3	9.5	13.6	3.0	3.2		